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SUMMARIES OF REPORTS SUBMITTED BY AFFECTED ASIAN COUNTRY PARTIES

Addendum

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SRI LANKA

No part of Sri Lanka falls within the range of ratios specified in the Convention. However, within the Dry Zone, which is conventionally defined as the area receiving less than 1900 mm of rainfall annually, where the ratio of annual rainfall to potential evaporation falls within the range 0.05 to 0.65 during a major part of the year due in part to the very low rainfall received and in part to the low water holding capacity of the soils. Considering the monthly variations in evapotranspiration, frequent droughts experienced, anticipated climatic changes and the accelerated land degradation that is taking place due to human activities, it is likely that desertification may emerge as a problem in the Dry Zone in the near future.

Land degradation, however, is not confined to the Dry Zone. It is a severe problem in the Wet Zone as well, especially in the mid-country where steep slopes, high intensity rainfall and inappropriate land uses have led to high rates of soil erosion, landslides, etc. Land degradation therefore has to be treated as a problem that is widespread, occurring in all of the agro-climatic zones at varying intensities.

Land Degradation - Nature and Magnitude of the Problem in Sri Lanka

The demands of a rapidly expanding population has set up pressures on the island's natural resources and these in turn have resulted in a high level of environmental degradation. The more important manifestations are heavy soil losses, high sediment yields, soil fertility decline and reduction in crop yields, marginalization of agricultural land, salinization, land slides and deforestation and forest degradation.

(a) Heavy Soil Losses

It has been estimated that nearly one third of the land in Sri Lanka is subjected to soil erosion, the erodible proportion ranging from less than 10.0 per cent in some districts to over 50.0 per cent in others. The most vulnerable districts are those in which a high proportion of land is given over to either tea, annual crops or chena or shifting cultivation.

(b) High Sediment Yields

A part of the soil that is removed is transported by rivers and streams leading to sedimentation of reservoirs, downstream floods, etc., commonly referred to as the off-site effects of soil erosion. Some recent studies done within the Upper Mahaweli catchment have shown high rates of sediment yield in some rivers such as the Maha Oya and the Uma Oya.

(c) Soil Fertility Decline and Reduction in Crop Yields

A major reason for the decline in yields of plantation crops and food crops over the past several decades has been the loss of valuable top soil due to erosion. Agriculture on sloping lands in many areas is generally maintained by the artificial replacement of nutrients removed by erosion. Available evidence suggests that vegetable growers in the upcountry use large amounts of fertilizer to make up for the increasing poverty of the soil.

(d) Salinization and Water Logging

Records of the actual extent of land affected by salinity or data that indicate recent trends are not available, but sporadic studies seem to indicate the development of salt affected soils in lowland areas in the Dry Zone. Salinization of low-lying farm lands in coastal areas due to salt water intrusion is also a problem. Although water-logging is not considered a serious problem; nevertheless, some lands in the coastal districts of the Wet Zone have been withdrawn from agriculture due to excess water.

(e) Marginalization of Agricultural Land

A sizeable extent of agricultural land in different parts of the country has become marginal or uneconomic. Apparently, a substantial portion of the remaining unutilized state lands is also marginal in nature. A significant proportion of the tea lands in the country are also considered to be marginal or uneconomic.

(f) Landslides

A reconnaissance survey carried out in landslide-prone areas has indicated that approximately 12,500 square miles are vulnerable to landslides. The available evidence seems to indicate that the country has been experiencing a spate of landslides over extensive areas in the central and south-western parts of the country since the early 1980s.

(g) Deforestation and Forest Degradation

The natural forest cover in the country which stood at 80.0 per cent until the turn of the century, had dwindled to less than 24.0 per cent by 1992. The deforestation has taken place both legally and illegally. Forests have been cleared legally for agriculture and settlement schemes and other development projects; they have been cleared illegally for shifting cultivation and for agriculture and settlement by encroachers. The quality of the forests in the country has also been declining due mainly to shifting cultivation, illicit felling of trees and encroachments.

Droughts

All parts of the country are subject to droughts. The problem of drought is particularly severe in the Dry Zone where the failure of rains in the main cultivation season, September to March, can spell disaster to thousands of families depending on rainfed agriculture for their livelihood. It has also been indicated that the probability of the occurrence of drought in both Maha and Yala is greater in the Dry Zone than in the Wet Zone.

National Policies, Strategies and Plans Prepared to Address Land Degradation Issues

The Government's growing concern about environmental issues, in general, and land degradation, in particular, over he past two decades or so is reflected in the different policy initiatives that have been taken, the strategies that have been formulated and the plans that have been prepared. The policies spelled out the Government's intentions regarding the management of

natural resources including forests and water, the strategies establishing the priorities for the management of these resources, and the plans identifying the main management issues in each sector and providing a comprehensive long-term development framework for the different sectors.

Current Institutional Framework for Addressing Land Degradation Issues

The task of protecting and sustainably managing the environment is shared by the number of state institutions. The state sector institutions include a number of ministries and their line departments and agencies at the national level; and the Provincial Ministries of Environment, Lands and Agriculture at the sub-national level.

1. National Level Institutions

There are nine ministries directly involved in addressing issues pertaining to land degradation. They are the Ministry of Forestry and Environment, the Ministry of Agriculture and Lands, the Ministry of Mahaweli Development, the Ministry of Irrigation and Power, the Ministry of Plantation Industries, the Ministry of Urban Development and Housing, the Ministry of Public Administration and Home Affairs, the Ministry of Plan Implementation and Parliamentary Affairs, the Ministry of Education and Higher Education. The ministries and their relevant line departments and agencies are given in Table-1.

Guidance in sustainably managing resources coming under the jurisdiction of a ministry in provided by the ministry in the form of policy formulation and plan preparation. These policies and plans are translated into action by the relevant line departments and agencies.

Institutional Mechanisms for Integrating Environment and Development

It has been estimated that approximately 80 per cent of the land in the country is under the control of the State. Although a number of government ministries, line departments and statutory bodies are responsible for the management of this land, none have the overall authority over land-use decisions. The existence of such a large number of agencies sharing responsibility over various aspects of land resource management has not only lead to an overlapping of authority, but also to contradictory decisions and policies. The need to devise a suitable mechanism to ensure sufficiently strong linkages between them has been met by the Ministry of Forestry and Environment by creating two new institutions at the National level:

(a) Committees on Environment Policy and Management (CEPOMs) and

(b) Committee on Integrating Environment and Development (CIEDP).

2. Sub-National Level Institutions

(a) Provincial level

The responsibility for protecting and managing the environment at the sub-national level is in the hands of Provincial Councils. This responsibility

stems from the Thirteenth Amendment to the Constitution of the Government of Sri Lanka passed in 1978. Under the Amendment, land administrative functions were devolved to the provincial and divisional levels. The Thirteenth Amendment also passed over to the Provincial Council the responsibility for "protecting the environment within the province.

(b) District level

The National Environmental Act empowers the Central Environmental Authority to appoint a District Environmental Agency for each administrative district consisting of such members as the Authority may determine. The functions of the committee include the assembling of relevant information on the environment and natural resources, coordinating environment related activities, identifying environmental problems and adopting measures to address such problems, planning and implementing programmes to increase environmental awareness, and performing any functions or duties delegated by the Central Environmental Authority.

(c) Divisional level

Each Divisional Secretary's Division has a Divisional Environment Committee chaired either by the Divisional Secretary or the chairman of the Pradeshiya Sabha. The functions of the committee include the collection of information on the environment, identifying environmental problems and finding solutions and assessing the environmental impact of development activities.

(d) Pradeshiya Sabhas

The Pradeshiya Shabhas Act empowers the Pradeshiya Sabha to appoint an Environment Committee comprising members of the Sabha and other persons from within the Pradeshiya Sabha area.

Legislation Enacted to Address Land Degradation Issues

Serious concern about land degradation in general and soil erosion in particular has been expressed for quite some time.

1. Land Resources

Two strategies have been adopted by the Government to address the problem of soil erosion. One is to incorporate environmental safeguards in legislative enactments pertaining to land and water resources development. The other is to introduce legislation specifically designed to prevent or mitigate soil erosion.

(a) Environmental Safeguards

Environmental safeguards have been incorporated in several pieces of legislation introduced since the 1930s. These include provisions to map out state lands for the prevention of soil erosion to ensure that owners of state lands as well as private lands adopt proper conservation measures, and punish persons who do not comply, to provide financial assistance; to promote water sheds management and the protection of critical water sheds, to prevent encroachment and clearing of forest and wild life reserves, and to encourage long-term research and technology for effective soil conservation.

(b) Prevention or Mitigation of Soil Erosion

A soil conservation Act was passed in 1951 to make provision for the conservation of soil resources, for prevention or mitigation of soil erosion and for the protection of land against damage by floods and droughts. It was subsequently realized that the provisions laid out in the Act were inadequate to meet present day demands and therefore the Act was amended in 1996.

International Assistance Received for Addressing Land Degradation Issues

The Government has been able to mobilize and utilize a substantial volume of foreign assistance for the conservation and management of natural resources. The assistance has come in the form of loans, grants and technical assistance. Between 1990 and 1999 approximately 33 projects have commenced with foreign assistance to promote the conservation and management of natural resources. Of the 33 projects, nearly half have focused on the management of water and forest resources. Assistance for the management of these two resources is being continued, but in recent years there has been a widening of interests on the part of donors to cover other concerns such as bio-diversity conservation and coast conservation. Of the sixteen projects for which assistance has been provided since 1995, four focus on bio-diversity conservation and coast conservation.

There has also been a recognition of the need to address other critical issues such as the promotion of environmental activities at the grass-roots level, the protection of critical watersheds, and the development of appropriate institutional arrangements to integrate natural resource management into development programmes.

Participation of Local Authorities, Non-Governmental Organizations (NGOs), Private Business and Academic Institutions in addressing Land Degradation Issues

Local Authorities, non-governmental organizations, private business and academic institutions have participated in the efforts being made by the Government to combat land degradation and promote the sustainable management of land and water resources. Local government authorities and private businesses have contributed directly by endeavouring to control land degradation within their respective areas of jurisdiction - the former in the non-plantation areas - and the latter in plantation areas. The NGOs and the academic institutions on the other hand have contributed indirectly - the former by raising environmental awareness amongst land users - and the latter by meeting the demand for trained personnel in the field of environmental management.

1. Local Authorities

There are three main local authorities in Sri Lanka - Municipal Councils, Urban Councils (for Urban areas) and Pradeshiya Sabhas. The Pradeshiya Sabhas are empowered to play a wide role relating to the conservation and improvement of the environment in their areas of authority, both under functions entrusted under Pradeshiya Sabha's Act and the functions entrusted by the Central Environmental Authority.

2. Non-Governmental Organizations

There are a large number of NGOs whose goal is the protection of the environment. Their main objective has been to raise environmental awareness among farmers and their children.

3. Private Businesses

Private sector involvement in addressing land degradation has been limited to a few companies engaged in agricultural production. Appropriate cultural practices and mechanical and biological soil conservation practices are being adopted by the companies on cultivated lands to minimize degradation and maximize production.

4. Universities

The universities are actively supporting government initiatives to address environmental issues by training personnel in environmental management, supported by both foreign funding and local funding. Several programmes on environmental subjects have been established and are now being implemented.

Recent Projects Implemented to Combat Land Degradation

A number of projects to promote the sustainable management of land resources have been implemented within the last one and a half decades with donor assistance from both multilateral and bilateral agencies. Some of these projects have been completed and others are being implemented. The major objectives have included reforestation and stabilization of denuded water sheds, management of natural resources in the Mahaweli catchments, protection of other critical water sheds, the mapping of land slide prone areas, the promotion of land-use planning and economically viable and ecologically sustainable farming systems, and institutional strengthening and policy formulation.

Experiences in Combating Land Degradation

All the projects implemented have had a common goal, i.e., to combat land degradation and improve the management of the land and water resources in the country. The activities undertaken by these projects however have varied. A wealth of experience has been gained through the implementation of these different activities. Some of the "lessons" learned are outlined below:

- Sub-watersheds and micro-catchments are better planning units because they are geographically defined and represent the "natural stage" on which the interaction of land, water and biotic resources take place;

- Land users can be motivated to take an active part in managing land and water resources by making them aware of the benefits of conservation and by developing simple and user-friendly interventions;

- Efforts made to involve land users in the management of land resources have not been entirely successful due to a number of reasons. Since participation has not been an unqualified success, an alternative approach is being tried out in which poverty and land degradation are treated as complementary issues;

- Institutional weaknesses, such as the unclear definition of institutional responsibilities and weak implementation capacity, have constrained the efforts to promote the sustainable management of land and water resources;

- The absence of a land-use policy has made it difficult to implement required land-use changes in areas vulnerable to land degradation.

- Some national policies have also hampered efforts to combat land degradation. Protection of some crops from imports has led to an extension of the area given over to erosive crops, while subsidies on fertilizer have encouraged farmers to use more fertilizer on degrading lands rather than adopt soil conservation measures.

SYRIAN ARAB REPUBLIC

Desertification is a major constraint for development in the Syrian Arab Republic, particularly in most of the Syrian Badia Rangelands (Steppe Zone) and the margin zone which is located between the Badia zone and the agricultural lands. Both zones, which originally had fragile ecosystems, are suffering from mismanagement and misuse of natural resources, in addition to severe disorders of the ecological system, since the end of the 1950s. Besides that, many factors are still playing a major role in deterioration of the environment overall both zones such as drought which has affected the area for many years. It is not surprising that policies and development plans are recently more concerned about the issues of environment health, perfect and rational use of resources, sustainability and ensuring the welfare of future generations.

The latest development plan of the Syrian Arab Republic concentrated on the necessity and importance of the protection of the environment. It concentrated on the conservation and rehabilitation of deteriorated natural resources, with the guarantee and adoption of sustainable development principles of all natural resources (especially the unrevived ones) and promoted the collaboration and participation of local national communities in preparing and implementing the NAP, based on the participatory approach.

Through activities of the Ministry of State for Environmental Affairs, especially during the last five years, the MSEA has prepared and developed several strategies and national action programmes related to Agenda 21 such as:

- National building capacity funded by the World Bank;

- Protecting of Ozone layer funded by UNEP;

- National study on Biodiversity;

- National Strategy on Biodiversity.

One of the most important recommendations of the National Environmental Strategy was the preparation of the National Action Programme to Combat Desertification in Syria in order to guarantee the integration between development and environment at the national level.

Before 1995, national efforts concentrated on some projects and programmes funded through the Syrian Government or through technical and financial assistance/cooperation with international/Arabian organizations. These projects aimed at stopping land degradation and promoting rational use of natural resources, by implementing projects.

In 1995, the Syrian Government, in close collaboration with the Arab Organization for Agricultural Development (AOAD), has prepared a National Action Programme (NAP) to Combat Desertification. The Programme advocated the following:

- The rational use and conservation of natural resources;

- Taking all possible measures to integrate the population/target groups in designing and implementing their development programmes and in decision- making;

- Empowering population/target groups to plan and steer actions to improve their living conditions while sustaining their national resource heritage;

- Adopting an integrated and holistic approach to achieve economic development and alleviate poverty;

Most recently, the Government, in collaboration with the United Nations Development Programme (UNDP) has initiated a project on National Action Programme for Combating Desertification in Syria. This project will build on the existing NAP (of 1995) to formulate an integrated programme that contributes to the existing efforts in order to achieve the set goals and targets, and to meet Government commitments. The new NAP will streamline other environment strategies and programmes, enhance the integration of existing projects, ensure coordinated action, and enhance coordination.

The new National Action Programme to Combat Desertification in Syria is expected to be enhanced and integrated into other environmental/developmental strategies and programmes and to provide adequate coordination between all stakeholders, and clarification of all activities which might be implemented at the regional/subregional level.

Local communities, especially women, are expected to draw benefits from this NAP through training and awareness programmes. It will increase knowledge and environmental education about desertification and its causes and impacts on natural resources, food production, national economy and the population that lives inside or outside the affected areas. Participatory approach is expected to provide the suitable means to encourage all efforts and coordinate them in order to streamline the knowledge and experience of all concerned national stakeholders, NGOs, and regional research centres to cooperate and assist in formulating NAPs meant to protect the environment, combat desertification and reduce the impact of drought.

The Ministry of State for Environmental Affairs (MSEA) has been designated the National Focal Point for implementing the NAP to combat desertification. Within the MSEA is the Department of Soil and Land Conservation, which is the National Coordination Body (NCB) for all matters regarding UNCCD. The head of this department is also the national focal point, as well as the national Coordinator of the NAP to combat desertification which is funded by UNDP.

Two committees have been established to implement the NAP, including all stakeholders, NGOs, representatives of UNDP, international organizations such as ACSAD, ICARDA, AOAD and research centers.

The NCB financial resources are derived from the MSEA common budget, but a sizeable support comes from the UNDP assisted project and the Syrian Government. The National five-Year Development Plan allocates funds to projects and programmes with integrated components that relate to combating desertification.

At present NCB has no database, but plans and current efforts are directed to establish this facility. Some governmental institutions, regional organizations (ACSAD, AOAD and ICARDA) and research centres, which are members of the SC and the NTC, have databases. NCB can collaborate with and draw information from these databases to make an assessment and analysis to prepare and formulate a programme of priorities.

The project management has facilities such as: telephone, fax and e-mail; other audio/video equipment and a four-wheel drive vehicle.

Currently, awareness raising and encouragement of local populations to participate in resource conservation and checking of land degradation is done mainly within the context of environmental education campaigns.

Governmental institutions, NGOs and projects are active in this respect. MSE has an Information and Environmental Awareness Committee, which can also coordinate efforts to inform and educate the public about UNCCD and relevant actions.

Collaboration with the international community in stopping land degradation and combating desertification commenced early through projects on rangeland rehabilitation, afforestation, land management, irrigation and water resources management through assistance from France, Germany, Italy, FAO, UNDP, UNEP and others. However, the Government has not yet determined specific mechanisms to ensure funding for projects and programmes that will be formulated within the NAP under preparation.

The Syrian Government has so far not defined a suitable mechanism to get financial support for projects and programmes derived from implementing the National Action Programme to Combat Desertification in Syria.

Together with the efforts to formulate practical indicators to monitor implementation of the UNCCD, use should be made of the methodology developed by GORS, and other national institutions such as ACSAD and ICARDA.

TUVALU

Tuvalu is a small atoll nation populated by around 11,000 Polynesians, located in the Central Pacific north of Fiji. The country is characterized by high dispersion, with a total of just 26 km^2 of land area distributed among nine islands over a sea area of 1.3 million km^2.

Tuvalu's location, small size and remoteness makes it a nation extremely vulnerable to climatic events and human impacts. In recent years, the country has seen the emergence of problems with drought and habitat damage. Although the overall climate is tropical-marine with a mean annual rainfall of 3000 mm at the capital of Funafuti, other islands in the group are experiencing periods of drought, particularly in the north. Problems with drought occur not only because of a lack of rain, but also because of the nature of the coral rubble and sand soils, the complete lack of surface water storage (no rivers, dams or lakes) and the very limited reserves of largely brackish groundwater.

In order to help it address these issues, the Government of Tuvalu signed the UNCCD in 1998. Although, to date, some reactive measures have been taken (such as the acquisition of a desalinator), very little strategic and pre-emptory action has been taken on issues of habitat degradation or drought, largely due to a lack of expertise and understanding. The country now wishes to begin addressing these problems through the international mechanisms of the UNCCD.

UNITED ARAB EMIRATES

Introduction:

Taking into consideration that the United Arab Emirates (UAE) are located within the arid west continent desert belt, the environment (as that of many of the arid and semi-arid environments in the world) is highly sensitive. The sensitivity is attributed to the delicate balance between various natural systems arid components such as climate, water resources, soil, vegetation, and biodiversity. Accordingly, its exposure to the impacts of aridity and desertification is considered as a recurring phenomenon.

The UAE, since its establishment, had not spared efforts to conserve its environment, develop natural resources on a sustainable basis, and combat desertification. The UAE considered this as one of its development pillars and thus was able to accomplish great achievements in various fields related to environment and desertification. These achievements would not have been possible without the wise policies that His Highness Sheikh Zayed Bin Nahyan developed when dealing with environmental issues. His Highness Sheikh Zayed Bin Sultan Al Nahyan, the President of the UAE, highlighted this interest in his message to the Earth Summit in 1992, as well as in the UAE country report to the UNCCD Conference of the Parties in 1997.

The establishment of the Federal Environmental Agency (FEA) in 1993 reconfirmed the UAE interest in the environment and constituted a major step towards consolidating the role of the federal government in addressing environmental concerns within the country. This included the preparation of the National Environmental Strategy and the National Environmental Action Plan and the National Action Plan to Combat Desertification (Draft). The objectives, scope and contents undertaken by the FEA are summarized below:

I. The Nations' Strategy and the National Plans for the Environment and Combating Desertification

Part One: Priorities For Environmental Action (National Agenda 21)

The National Environmental Strategy and the National Environmental Action Plan of the UAE were developed in the context of the National Policies for Conservation, sustainable development of natural resources, combating desertification and fulfilling the commitments of Agenda 21. UNDP and UNESCWA cooperated with the FEA to develop the National Environmental Strategy and the Environmental Action Plan.

The first report, completed in December 1998, represents an integration of the sectoral reports prepared by ten sectoral work groups that addressed environmental aspects and development in the UAE. The report is divided into six chapters as follows:

UAE, geographical characteristics;

Elements of sustainable development;

Elements for planning an Environmental National Strategy and National Environmental Action Plan;

Major environmental issues in the UAE;

Environmental capacity-building in the UAE;

Priorities for environmental actions in UAE.

Part Two: The Development of the National Environmental Strategy

The National Environmental Strategy, which was completed in December 1999, includes strategies that were developed by the 10 sectoral groups representing various environmental and developmental aspects in the UAE. These sectoral strategies are based on priorities identified by the sectoral groups in the first report, which are:

- Availability of fresh water resources;
- Combating pollution (water, air, waste);
- Conserving the marine environment;
- Conserving the urban environment;
- Conserving terrestrial resources, and biodiversity.

Sectoral strategies are synthesized into a National Environmental Strategy reflecting objectives and policies and comprising seven chapters:

Chapter 1: Introduction: environmental characteristics and environmental strains in the UAE;

Chapter 2: National Environmental Strategy for Water Resources;

Chapter 3: National Environmental Strategy for reducing air and water pollution problems;

Chapter 4: National Environmental Strategy for Problems of marine environment;

Chapter 5: National Environmental Strategy for Problems of urban environment;

Chapter 6: National Environmental Strategy for land resources degradation and biodiversity;

Chapter 7: National Environmental Strategy for capacities and awareness.

It is obvious that all the strategies described above are related to desertification in one way or another, but more specifically in Chapter 6.

Part Three: The Draft National Action Plan to Combat Desertification in the UAE

The UAE, in cooperation with UNEP/ROWA and ESCWA, prepared a draft National Action Plan to combat desertification. The plan was completed by the end of 1995, and has not been yet implemented, hoping to integrate it with the National Environmental Strategy and the Environmental Action Plan which are to be completed. Integration of the three programmes will ensure addressing environmental issues in a balanced and comprehensive manner.

The plan comprises the following elements:

Chapter (1): Listing of the natural resources and their potentials;

Chapter (2): The socio-economic set up;

Chapter (3): Past and present efforts in combating desertification;

Chapter (4): Includes the "National Action Plan for Combating Desertification". Eight programmes were identified in the strategy:

a. Monitoring and assessment;

b. Water resource management;

c. Public awareness and participation;

d. Rational agriculture;

e. Security against drought;

f. Promoting scientific and technological capabilities;

g. Promoting national capacity building programmes;

h. Consolidating federal, regional and international cooperation.

Chapter (5): Capacity-building;

Chapter (6): Identification of priority short-term (5 years) programmes during 1994-1999 which amount to about 27 projects.

II. The National agency responsible for implementing the agreement

The UAE has assigned FEA through ministerial Decree No. 41452 in 1997 to follow up the implementation of the UNCCD at the federal, subregional and international levels. The UAE acceded to the UNCCD in 21 October 1999 and became a member in 19 January 1999. Work is ongoing to institutionalize a National Committee, formed by representatives of around 20 ministries and other national and private organizations concerned with desertification. This National Committee will follow-up the implementation of the Convention and prepare a national strategy and action plan to combat desertification in accordance with the National Environmental Strategy and the Asia Annex of the Convention.

III. The Legal and Legislative Framework for Protection of the Environment

In absence of a Federal Environmental Act, the UAE issued Law No. 24 concerning Environmental Protection and Development in 1999. It includes nine chapters concerned with protection and conservation of renewable natural resources such as water, soil, and natural reservation. It has 101 articles addressing the following objectives:

1. Protection of the environment and conservation of its quality and natural balance;

2. Combating pollution in all forms, and avoiding any damage or long-term impacts as a result of any economic, agricultural, industrial urban development programmes intended to raise the standard of living and promoting cooperation between the Federal Environmental Agency and other governmental organizations concerned with the protection, and conservation of the environment and to consolidate environmental awareness and pollution combating principles;

3. Development of natural resources and a sustainable biodiversity in the UAE through utilization in the most efficient and sustainable manner for the benefit of the present and future generations;

4. Protection of human health, other living creatures from impacts related to activities and actions that are damaging to the environment;

5. Protection of the environment of the UAE from impacts of activities carried out beyond the borders of the UAE;

6. Implementing provisions in approved international and regional agreements related to environmental protection, combating pollution and conservation of natural resources.

IV. Institutional Framework to conserve the environment

The organizational structure suggested for the FEA comprises several directorates made of sections among which is the agricultural activity and combating desertification section. Similar units are also operating at the state level, reflecting the interest of the country in conserving the natural resources and combating desertification. In order to provide adequate coverage, the Government actually pursues capacity-building through local training programmes and external scholarships for obtaining higher degrees in areas relevant to combating desertification.

V. Integration of Combating Desertification programmes into the National Environmental Strategy

At the implementation level, the UAE's interest in combating desertification is highlighted in the first and second parts of the National Environmental Strategy. In addition, the chapter that is related to agriculture and land resources includes objectives, policies and measures that are needed to conserve land resources and to combat desertification. The activities of the National Environment Strategy are developed to include activities related to combating desertification and reducing the impact of aridity. Once the National Action Plan to combat desertification is completed and approved, it will be integrated into the National Development Plan.

VI. Subregional, regional and international cooperation in combating desertification

The UAE has participated in subregional and regional meetings, e.g.: the Subregional Action Plan meetings for West Asia, as well as the Asian regional meetings. The regional and subregional programmes have emphasized the need to harmonize their programmes with the goals of National Action Plans that include monitoring and assessment of desertification, early warning for drought and desertification, water resource management, capacity-building, developing rangelands and forests, and fixation of sand dunes, etc.

At the national level, a survey of the coastal area of the UAE was conducted using field surveys. The UAE is also participating with the GCC countries in preparing a draft project to survey and evaluate rangelands and forests in these countries. The UAE is also actively participating in the Steering Committee to Combat Desertification of CAMRE. The committee, in cooperation with subregional and regional organizations, was able to implement several projects in the framework of the programme for Combating Desertification and Mitigation of Drought effects. The committee will also link national programmes with subregional and regional programmes to benefit from the available capabilities and expertise.

VII. Activities relevant to Combating Desertification that have been implemented

The main activities relevant to combating desertification and conservation of natural resources include:

- Developing laws and regulations relevant to conservation and sustainable management of the environment and renewable natural resources;

- Preparation of the National Atlas that includes geographical and geological general information;

- Conducting many surveys on ground-water resources;

- Surveying the number of Aflaj and identifying the quantity of their water productivity;

- Developing wastewater treatment plants with an annual production capacity of 108 million cubic meters;

- Afforestation areas have been developed and reach 300,000 Dunms;

- Establishment of several natural reservations on islands and remote desert areas;

- Dubai, AI Ain, Shwjah and Abu Dhabi. Municipalities have prepared land-use maps defining agricultural, urban and public areas;

- Agricultural policies in the UAE have been geared to encourage rational use of natural resources and achieve the highest level of yields. Also, there is a common agricultural policy for WC which was drawn in 1984 and amended in 1999;

- A National Committee will be formed to carry out the action programmes to combat desertification. However, the need arises both at UAE and GCC levels for technical assistance from donors and international organizations. However, UAE intends to include these technical needs within programmes prepared for combating desertification.

VIET NAM

Nowadays environment protection is not only an important national own interest, but also a great global concerned aspect. In Viet Nam, this issue has become a great concern of the State since the 1980s. It has also been mentioned in the Constitution of the Socialist Republic of Viet Nam since 1980. The National Action Programme on Environment and Sustainable Development for the period 1991-2000 and the Law on Forest Protection and Development approved in 1991 had set a very important start for the follow-up activities in environment protection progress in Viet Nam.

Recognizing the important global meaning of environment protection, Viet Nam has signed and become a member of several conventions on environment protection and the 134th country member of the Convention to Combat Desertification (since August 1998).

Viet Nam has long and narrow deserts. The yellow and white sand areas are located along the central coastal areas with 400,000 ha and in Cuu Long River Delta with 43,000 ha. According to a map drawn by FAO and UNESCO, there are about 462,000 ha of coastal sand areas (1.4 per cent of the total geographical area of the country) and 87,800 ha out of this are the yellow sand dunes. The sand areas are concentrated in 10 central coastal provinces from Quang Binh to Binh Thuan with the total area of 400,000 ha. During the last 32 years

(1967-1999) there has been a serious desertification process. Every year, there is a loss of 10-20 ha of agriculture land due to the sand dune moving. In the above-mentioned provinces there is a very arid hot climate with annual rainfall only 500-700 mm (the arid hottest is Binh Thuan province).

Besides sand areas, there are more than 2 million hectares of degraded land scattered all over the country. This degradation happens mainly in northern mountainous areas. The desertification process is summarized and characterized by the following factors:

- It is the process of land degradation, unfertile for flora growing;
- It is the result of deforestation by inappropriate agricultural practices, extensive logging and chemical use during the wars;
- It is the cause of soil erosion;
- It is caused by unsustainable land use;
- It is caused by extensive water use;
- It is caused by sand dune moving;
- It is a result of water and soil pollution;
- And it is the impact of extensive silvopastoral practices.

Nowadays in Viet Nam there are still about 7 million hectares of bare land. The fertility of soil has been dropped or seriously degraded. Forests have been seriously depleted. The forest cover is today only 33 per cent, 10 per cent less than the one in 1945. Deforestation happened seriously in the two periods: 1960-1970 and 1976-1990. The underground water has been deteriorated in quantity as well as in quality, mainly by water exploitation for coffee production in Central Highland. Water has also been polluted by the chemical industry. It is estimated that the lack of water will be a serious problem in the next decade. During the last five years, drought has happened more seriously in the whole country, but especially in the central region. The most serious and longest drought over the last 60 years happened and lasted six months during the dry season of 1998 due to the El Niño, which had caused a very bad impact on agriculture and forestry in eight provinces of the central coastal region and Central Highland. Land cracking and soil erosion have also become more and more serious in Cuu Long river delta. A survey has recorded 51 cracking points with 350 ha of land lost every year. It is estimated that the total land lost by cracking and erosion will reach 10,000 ha. Sea resource exploitation has also been another reason for water and land pollution. Sea products have been mainly exploited near coastal areas by the use of poisonous chemicals or explosives. Oil is the main chemical causing water and soil pollution (during the period 1992-1996, the oil content in the sea water increased from seven to 20 times).

Since 1989, the economic system has changed from the concentrated planned mechanism to market oriented mechanism. And since then several programmes and projects not only in socio-economic development but also on environment protection have been intensively implemented. Viet Nam, since that time benchmark, has not only presented its great progress in hunger eradication

(today as the third biggest country of the world in rice export, in 1999 with 4.55 million tons) but also committed its responsibilities in global environment protection propagation. The year 1990 has been the milestone marking a significant achievement of Viet Nam in environment protection. A number of laws relating to the desertification combating process had been formulated during the period 1990-1998. Viet Nam has stressed its responsibilities/commitments in joining the world in global environmental issues by signing agreements to become a member of several international conventions on the environment. A number of programmes and projects have also been intensively implemented since 1990.

Beside great achievement, there are still, however, many problems and constraints caused by the economic changes. There is still a lack of adequate knowledge of people on environment protection. Environment protection is still not mentioned as the major issue to be taken in many provincial plans on socio-economic development. A more appropriate policy system for environment protection is still to be adjusted and adopted. The Decree 36-CT/TW, June 1998, of the Communist Party to strengthen activities on environment protection in the modernization and industrialization period has developed the strategy to adopt the environment protection as an important issue of every national socio-economic development action.

In this situation, being a member of several international conventions on environment issues, as well as of UNCCD, is an essential further step of Viet Nam in joining the global environment propagation and in setting up long-term strategies of the country on environment protection and sustainable development.

The national report has followed exactly the Guidelines of UNCCD, decision 11 of COP 1. It has drawn briefly the main information on environment protection as well as in land conservation, forest protection and development, water conservation and sand dune fixation activities of Viet Nam. This report is the result of the collaboration/cooperation among the representatives of the Government Office; the Ministry of Foreign Affairs; the Ministry of Planning and Investment; the Ministry of Science, Technology and Environment; the Ministry of Agriculture and Rural Development; the Viet Nam Forestry Science Association; UNDP; FAO and the executing agencies of international programmes and projects ongoing in Viet Nam. The report is also the result of a National workshop with the participation of many other social, economic, environmental sectors and institutions relating to the environment protection and sustainable development in Viet Nam.

The main content of the report is divided into eight parts:

1. Summary;

2. Strategies and priorities established within the framework of sustainable development plans and/or policies;

3. Institutional measures taken to implement the Convention;

4. Participatory process in support of preparation and implementation of action programmes;

5. Consultative process in support of the preparation and implementation of national action programmes and the partnership agreements with developed country and other interested entities;

6. Measures taken or planned within the framework of national action programmes;

7. Financial allocation from national budgets in support of implementation as well as financial assistance and technical cooperation including their inflows, and the process to identify their requirements, areas of funding and set a priority;

8. Review of benchmarks and indicators utilized to measure progress and an assessment thereof;

The priorities and strategies of the country relating to desertification combating are indicated as follows:

1. Population growth control to release the pressure on natural resources;

2. Sustainable management of natural resources;

3. Forest protection and development;

4. Urban and industrial zones development planning;

5. Research, training and extension activities on environment;

6. Disaster control and forecasting system;

7. Planning and policy formulating on environment;

8. Control the process of desertification, forecast the impacts of this process to the most endangered provinces/areas and support these localities in setting up a socio-economic development plan with environment protection concern.

The report also draws up some models on sand dune fixation along the central coastal areas, of which the successful implementation is the result of Professor Lam Cong Dinh's works on application of some specific species for sand dune fixation as *Casuarina equisetifolia* and *Azadiracta indica* in setting up forests against sand dune moving in some central provinces of Viet Nam. Professor Dinh has been nominated for the Ho Chi Minh Award in 2000.

The report stresses the important role of local people and women in activities related to desertification control. If the programmes and projects on environment protection are not implemented by local people, they will hardly be successful.

The report has also mentioned a tentative organization structure of the National Coordination Body and the proposed National Focal Point and the mobilization of organizations and people to participate in the National Action Programme on Environment.

The important role of international cooperation and the necessity of integrated programmes/projects on the environment to high up the efficiency of the cooperation have been emphasized. The great contribution in terms of

financial support and technical assistance by international organizations, by government and non-government organizations in activities on desertification combating in Viet Nam has also been highly appreciated.

YEMEN

Desertification is one of the problems threatening the lands of the Yemeni Republic and other natural resources. Such land deterioration accelerated due to the increase of pressure on limited natural resources, resulting in a decrease of production. Desertification appears in different forms. Recent estimates indicated that 97 per cent of Yemen's Republic is affected by various degrees of desertification. Consequently, the Government of the Republic of Yemen quickly signed and ratified the United Nations Convention to Combat Desertification and works in close cooperation with the international community that aims at combating such detrimental natural phenomena. This summary sheds light on efforts carried out by the Republic of Yemen to implement this Convention:

1. Strategies and priorities established within the framework of sustainable development plans or strategies.

The Republic of Yemen set within its strategies and priorities the establishment of sustainable development projects. Some of these projects are concerned with combating desertification, such as the implementation of the national plans that covers a five year plan for social and economic development (1996-2000). These include conservation of water resources, development, and wise management, along with other environmental subjects. Most of these plans have been implemented, with some remaining activities still under implementation until today.

With reference to the national plan for environmental measures, priorities were determined for environmental problems in Yemen. They address soil and natural resources deterioration, over exploitation of the water table and water pollution.

The Republic of Yemen prepared a Desertification control plan. This plan was considered the main reference of combating desertification for all international, regional, and national organizations. The Republic of Yemen implemented a number of projects related to combat desertification in different areas of the Republic, aiming to control soil erosion, sand dune stabilization, land classification for agriculture use, forestry development and a general increase of green areas. At present, a number of projects are under implementation, as well as there are numbers of future projects distributed in different zones of the country. All above-mentioned projects aim at controlling desertification. One of the most important issues related to desertification is poverty alleviation which aims at developing areas depending on local community strategies, in such a manner, to hand over control to local communities. Since 1998 a water strategy is under implementation which aims at addressing the acute imbalance between people and water resources.

2. Measures taken to implement the Convention.

The GDFDC was appointed NCB, because it was considered the national authority involved in the implementation of different activities such as

management of forestry-range resources and Desertification control. Implementation of the Convention within GDFDC is carried out in two ways, as follows:

(a) Focal point (FP): the General Director of GDFDC was appointed Focal Point to follow up on the development and progress of implementation of the Convention at national, subregional, regional and international levels;

(b) National Network to combat desertification: This network includes members from various governorates within the Republic of Yemen. It carries out the collection and updating of information with respect to Desertification control and easing the strain of affected areas, which have priority in Desertification control, contribution in evening extension gatherings linking and coordination the affected areas. Enlarge this network by including a number of governmental and non-governmental corporation concerned with desertification control, communication and coordination between members of the authority and people concerned is achieved by running activities through direct communication or fast facilities available such as telephone or fax; communication with subregional, regional and international organizations is achieved through fax, mobile telephone, e-mail and internet.

The authority is implementing the national work programme and similar activities in desertification control, strengthening capacities for forest, range management, watershed, preparation of maps and supporting the contribution of non-governmental organizations, particularly women associations, agricultural cooperation unions in desertification control.

3. Participatory process in support of preparation and implementation of action programme

It is not possible to create sustainable development plans without integrating national stakeholders into development strategies. It should be recognized that there is a shortage of quantitative and qualitative information on conditions of natural resources in the country. As a result, there is a shortage in education about environmental deterioration and its impacts. Another shortage lies in the preparation and implementation of a national programme of work. It is to be noted that awareness and involvement increased over the last period of time as a result of efforts exerted by the GDFDC. Such achievements targeting large sectors of the society resulted in an improved awareness and the public more readily recognizes in areas such as desertification. Efforts are exerted by Broadcasting, Education, Awkaf, Extension, Youth, Sport Sectors and Environmental Protection Council (EPC).

It is worth mentioning that the Republic of Yemen received aid from the Kingdom of the Netherlands for implementing a project in Policy Gender in Agriculture and Food Security. This assistance was granted based on the belief that the role of women and their contribution in protecting and managing natural resources, as well as in desertification control in general, is important.

4. Consultative process in support of the preparation and implementation of national action programmes and partnership agreement with developed country parties and other interested entities

The Republic of Yemen is working in desertification control with regional and international agencies, through the implementation of different bilateral or multilateral desertification control projects, or research working plans, such as five year plan projects related to desertification control. Also, an invitation was forwarded to developed countries to participate in national workshops concerning desertification control, rehabilitation of deteriorated natural resources, reactivation of the women's role and people's contribution. The main on-going activities with those agencies are:

(a) Sustainable environment management programme: This programme consists of seven subprogrammes. It aims at building capacities for a number of government corporations, non-governmental organizations in environment management, soil deterioration and sustainable utilization of natural resources;

(b) Soil and water conservation project: This project aims at maintaining terraces, implementing an appropriate watershed management and sand dune stabilization;

(c) Environment protection project in Tihama: This project aims at strengthening the Government's programme of improving the living standards within rural areas;

(d) Sustainable Environmental management project: This project aims at building up administrative capacities for the national authority of water resources;

(e) Forestry development project: This project aims at strengthening GDFDC in developing plans concerned with the forestry sector, extension regulations and the collection of information about natural resources and its management.

(f) To fulfill called regional and international counterparts to participate in a number of workshops, mainly "The National Conference on Desertification Control", "National conference to review the National Plan to control Desertification and two technical workshops", (first and second) for the preparation of national policy in watershed.

5. Measures to be taken or planned within the framework of national action programme

The Republic of Yemen prepared a National Action Plan to control Desertification in cooperation with UNEP and ESCWA. This plan was considered the foundation for subsequent national work in desertification control. This plan includes eight programmes and 41 projects focusing on evaluation, common contribution, correction measures for desertification control along with socio-economic, insurance against drought implementation of proposed or planned procedures in desertification evaluation, improvement of range, general contribution, systematic procedures on desertification control, curing socio-

economic sides, measures aimed at preventing droughts, strengthening science and technology and international cooperation in desertification control.

The plan includes a number of measures aimed at improving institutional structures and strengthening the level of awareness. The following measures were taken to achieve these goals: the development of GDFDC, the improvement of environmental protection, establishments of funds for agriculture and fish production, water resources authority and reactivation of the high tree planting committee.

Future plans are: to establish the National Committee for Desertification Control in which all related ministries, organizations, official, social and voluntary associations of concern will be represented.

It is worth mentioning that national experts who participate effectively in regional and subregional national networks make all pertinent decisions.

6. Financial allocations from national budget in support of implementation as well as financial assistance to strengthen implementation

The Republic of Yemen has taken necessary steps to ensure the financing of projects related to desertification, with the help of an annual financing plan. These annual financing plans are integrated into the five year plans. It takes these steps in order to create a mechanism of finance. The most important step is the establishment of a financial source that addresses agriculture and fish production.

An important source of finance is derived from selling diesel within the country, along with a government budget allocated in the general budget. These sources of funding are supplemented by external assistance and grants.

Regarding financial allocations from the national budget, expenditures are used for needed manpower, for implementation of the national plan of Desertification, the provision of building furniture needed for the national coordination body, as well as supplementing the financing of projects that are externally financed, such as watershed management and the re-use of sewage water which is financed by The Kingdom of the Netherlands. The Government provides 145 million Yemeni Riyals or them. The Republic of Yemen is classified as a developing country. Thus it had obtained financial and technical support from a number of governments and organizations, mainly FAO, UNDP, IDA and IFAD.

Despite the financial resources allocated from local budget and foreign financial aid, implementation of the national programme in desertification control needs additional financial and technical support. Regarding financial support, it could depend on the following fundamentals:

(a) Provision of extra financial allocations from the national budget to Combat Desertification;

(b) Provision of financial component needed for desertification control in development projects;

(c) Encouraging the establishment of trans-boundary projects in international borders and searching for funding these projects;

(d) Increasing the coordination with local financial sources;

(e) Encouraging the contribution of Regional and International financial sources.

Regarding technical cooperation: it is proposed to develop this cooperation with developed countries, international and regional organizations concerned as follows:

(a) To upgrade scientific standards in desertification control;

(b) To support projects implementing traditional techniques related to water harvesting and resources conservation;

(c) To encourage the stability of local rural communities and a decrease in the immigration to towns;

(d) To establish a specialized centre for desertification control;

(e) To encourage the application of modern technology in providing energy alternatives;

(f) To increase the utilization of remote sensing and, GIS, in desertification monitoring and control as well as to establish a qualitative database.

7. Review of benchmarks and indicators utilized to measure progress and an assessment thereof

Until now Yemen has no systematic benchmarks and indicators to measure the application of the programme of work. For this reason a number of benchmarks and indicators derived from the documents distributed by the permanent secretariat of UNCCD or approved and used by some country Parties have been used by Yemen. The following, is benchmarks and indicator depends on:

Establishment of an environmental protection council as a mechanism to observe environment and evaluation.

(a) Establishment of a unit for evaluation and monitoring within the national coordination body as a follow-up mechanism ;

(b) Starting up the establishment of GIS and foundation of an informational system;

(c) Issuing quarterly and annual reports in the field of desertification control;

(d) Implementation of pilot projects and extension of their results to similar areas;

(e) Reactivation of the role of women through Gender Policy;

(f) Including desertification control programmes within development plans;

(g) Developing coordination with international agencies through signing assignments;

(h) Adopting of a number of traditional knowledge which has been accumulated by Yemeni farmers through the ages.

From the above-mentioned, it could be observed that the Republic of Yemen started implementing a number of concerned activities related to implementation of the United Nations Convention to Combat Desertification. The Republic of Yemen faced some obstacles in this respect, such as trained personnel and lack of modern equipment, which are needed to establish an informational network. Experience showed that cooperation with developed countries, regional and international organizations enables the national coordination body to implement the UNCCD, in particular, reactivation of women's role, increasing of people's contribution and training of technical personnel.

There is no doubt that the continuous implementation of the Convention, in wide and better aspects, needs additional efforts and provides a number of essential factors, mainly technical support and fund allocation, which will help the Republic of Yemen to follow the international trend in this domain.

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